center portion, the peripheral portion of the cooling fan disposed directly below the image forming liquid crystal light valves for the blue and green beams, and the center portion of the cooling fan being disposed directly below the image forming liquid crystal light valve for the red beam.

14. (Amended) A projector comprising:

a light source;

separation optical elements that separate light emitted by the light source into beams of blue, green and red colors;

liquid crystal light panels that modulate respective ones of the blue, green and red beams separated by the separation optical elements;

a synthesizing optical system that synthesizes the blue, green and red beams modulated by the light panels;

a projection lens that receives the synthesized modulated light from the synthesizing optical system; and

a cooling fan positioned in a plane below a surface on which said liquid crystal light panels are secured, said liquid crystal light panels being operatively associated with said cooling fan by being positioned directly in the path of cooling air produced by said cooling fan, the cooling fan having a peripheral portion and a center portion, the peripheral portion of the cooling fan disposed directly below the liquid crystal light panels for the blue and green beams, and the center portion of the cooling fan disposed directly below the liquid crystal light panel for the red beam.

REMARKS

Claims 1-24 are pending. By this Amendment, claims 2 and 14 are amended.

Applicants gratefully acknowledge that the Office Action indicates that claims 1, 3-13 and 19-24 are allowed.

Applicants respectfully submit that all pending claims are in condition for allowance.

The attached Appendix includes marked-up copies of each rewritten claim (37 C.F.F. §1.121(c)(1)(ii)).

I. The Claims Define Patentable Subject Matter

The Office Action rejects claims 2 and 14-17 under 35 U.S.C. §102(b) over JP-02-196280 ("the 280 patent"); and claims 2 and 14-18 under 35 U.S.C. §102(b) over JP-01-289912 ("the 912 patent"). These rejections are respectfully traversed.

Neither the 280 patent nor the 912 patent disclose a projector type liquid crystal projector including, inter alia, a cooling fan having a peripheral portion and a center portion, the peripheral portion of the cooling fan disposed directly below image forming liquid crystal light valves for blue beams and green beams, with the center portion of the cooling fan being disposed directly below an image forming liquid crystal light valve for a red beam, as recited in claim 2, and as similarly recited in claim 14.

Instead, both the 280 patent and the 912 patent disclose fans having a center portion and a peripheral portion. However, the center portions of the fans of the 280 patent and the 912 patent are not disposed directly below any of the liquid crystal light valves disclosed in those patents.

Positioning the peripheral portion of the cooling fan directly below the image forming crystal light valves for the blue beam and the green beam and positioning the center portion of the cooling fan directly below the image forming liquid crystal light valve for the red beam provides significant advantages. For example, as discussed in the specification at column 15, lines 46-54, such positioning of the cooling fan allows each liquid crystal light valve to be effectively cooled without cooling loss.

None of the applied references disclose or suggest the claimed invention, or recognize or address the above mentioned advantages of what is claimed.

For at least these reasons, it is respectfully submitted that claims 2 and 14 are patentable over the applied references. The dependent claims are likewise patentable over the applied references for at least the reasons discussed as well as for the additional features they recite. Applicants respectfully request that the rejections under 35 U.S.C. §102 be withdrawn.

II. Conclusion

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,

James A. Oliff
Registration No. 27,075

Benjamin M. Halpern
Registration No. 46,494

JAO:BMH/gpn

Attachments:
Appendix
Petition for Extension of Time

Date: February 25, 2002

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

DEPOSIT ACCOUNT USE AUTHORIZATION
Please grant any extension necessary for entry;
Charge any fee due to our Deposit Account No. 15-0461

APPENDIX

Changes to Claims:

The following is a marked-up version of the amended claims:

2. (Amended) A projector-type liquid crystal projector comprising a light source, a plurality of color separating means for separating light emitted by said light source into beams of blue, green and red colors; optical means including image forming liquid crystal light valves and image synthesizing means for synthesizing images for the respective blue, green and red beams which are arranged in an optical path; and a projection lens,

a cooling fan being positioned in a plane below a surface on which said image forming liquid crystal light valves are secured, said image forming liquid crystal light valves being operatively associated with said cooling fan by being positioned directly in the path of cooling air produced by said cooling fan, the cooling fan having a peripheral portion and a center portion, the peripheral portion of the cooling fan disposed directly below the image forming liquid crystal light valves for the blue and green beams, and the center portion of the cooling fan being disposed directly below the image forming liquid crystal light valve for the red beam.

14. (Amended) A projector comprising:

a light source;

separation optical elements that separate light emitted by the light source into beams of blue, green and red colors;

liquid crystal light panels that modulate respective ones of the blue, green and red beams separated by the separation optical elements;

a synthesizing optical system that synthesizes the blue, green and red beams modulated by the light panels;

a projection lens that receives the synthesized modulated light from the synthesizing optical system; and

a cooling fan positioned in a plane below a surface on which said liquid crystal light panels are secured, said liquid crystal light panels being operatively associated with said cooling fan by being positioned directly in the path of cooling air produced by said cooling fan, the cooling fan having a peripheral portion and a center portion, the peripheral portion of the cooling fan disposed directly below the liquid crystal light panels for the blue and green beams, and the center portion of the cooling fan disposed directly below the liquid crystal light panel for the red beam.